PATENT ABSTRACTS OF JAPAN

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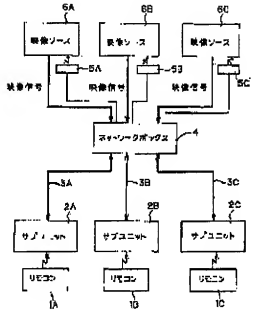
(54) VIDEO NETWORK SYSTEM AND VIDEO NETWORK SYSTEM CONTROLLING METHOD

(57)Abstract:
PROBLEM TO BE SOLVED: To apply priority only to a specified sub-unit.
SOLUTION: This system is provided with a network managing part. In this case, the network managing part receives data transmitted from plural sub-units 2A-2C and discriminates the sub-unit of a transmission source on the basis of ID data of these data. At the same time, the kind of data is discriminated and when the data are to operate video sources 6A-6C, according to these data, the video sources are operated and when the data are to acquire or cancel the priority, according to these data, operation from anywhere except for the specified sub-unit to the video sources is inhibited or canceled.



CLAIMS

[Claim(s)]
[Claim 1]An image network system comprising:
Two or more subunits which receive data of acquisition of data and a right of priority which operate a video source, or release sent out from a remote control, add ID information to those data and transmit to it.
While receiving data transmitted from a subunit of this plurality and distinguishing a subunit of a transmitting agency based on ID information of those data, In the case of data which distinguishes a kind of data and in which data operates the above-mentioned video source. A network management section which operates the above-mentioned video source according to the data, and forbids or cancels operation to the above-mentioned video source from other than a specific subunit according to the data when data is data of acquisition of a right of priority, or release.

[Claim 2]While including select data which chooses a video source as data sent out from a remote control, The image network system according to claim 1 constituting so that operation to the above-mentioned video source which chose a network management section with the above-mentioned select data from other than a specific subunit may be forbidden or canceled.
[Claim 3]The image network system according to claim 1 or 2 constituting so that operation of as opposed to a video source from the network management section itself [this] for a network management section may be forbidden or canceled.
[Claim 4]Data of acquisition of data and a right of priority which operate a video source, or release which is transmitted from two or more subunits and in which ID information was added is received, While distinguishing a subunit of a transmitting agency based on ID information of those data, In the case of data which distinguishes a kind of data and in which data operates the above-mentioned video source. An image network system control method which operates the above-mentioned video source according to the data, and is characterized by forbidding or canceling operation to the above-mentioned video source from other than a specific subunit according to the data when data is data of acquisition of a right of priority, or release.

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention]This invention relates to the image network system and the image network system control method of operating AV (Audio Visual) equipment group installed in one place by remote control with the signal from the remote control which two or more subunits installed in two or more places received.
[0002]
[Description of the Prior Art]In the ordinary home, various AV equipment, such as a CS tuner, a videotape recorder, and a DVD player, is used, for example. These AV equipment groups are installed in a living room etc., and are generally used together [family]. However, in order to make these AV equipment group available in rooms other than a living room, an AV equipment group will have to be installed in each part store, and it will be a burden economically. Then, the image network system which can use for cooperation the AV equipment group installed in the living room etc. at each place is proposed.
[0003]The conventional image network system comprises a subunit installed in two or more rooms other than a living room, two or more AV equipment groups installed in one place, such as a living room, and a network box installed near the AV equipment group.
[0004]If the remote control signal of the infrared rays etc. which operate the AV equipment group (video source) sent out from the remote control unit (henceforth a remote control) is received, two or more subunits will change the remote control signal into a control signal, and will transmit it to a network box. A network box reads the control signal from each subunit, and controls each AV equipment group according to the operation which the control signal means. A network box distributes the video signal received from each AV equipment group to two or more subunits.
[0005]According to such an image network system, with the remote control signal of the infrared rays etc. which were sent out from each remote control. It becomes possible to control the AV equipment group at the places (living room etc.) at which infrared rays etc. do not arrive, and becomes available to cooperation in each part store about the AV equipment group installed in the living room etc.
[0006]There are some which were indicated by JP,3-58695,A etc. as other conventional image network systems.
[0007]
[Problem(s) to be Solved by the Invention]As mentioned above, although the conventional image network system can control operation of an AV equipment group by the remote control signal sent out from two or more remote controls, Since a network box cannot be distinguished in the control signal transmitted from which subunit, it cannot grant a right of priority only to a specific subunit. That is, while controlling an AV equipment group by the control signal from a specific subunit (operation), it cannot be said that control (operation) of an AV equipment group is forbidden depending on the control signal from other subunits.
[0008]Therefore, when the image from the same AV equipment (video source) is being seen by each

subunit side for example, The technical problem of the quarrel over TV programs by each subunit arising, or being stopped by the control signal from other subunits during the recording of the image set to the subunit side of 1 occurred.
[0009]This invention is made in order to solve the above technical problems, and an object of an invention is to obtain the image network system and the image network system control method of granting a right of priority only to a specific subunit.
[0010]
[Means for Solving the Problem]An image network system concerning the invention according to claim 1, Two or more subunits which receive data of acquisition of data and a right of priority which operate a video source, or release sent out from a remote control, add ID information to those data and transmit to it, While receiving data transmitted from two or more subunits and distinguishing a subunit of a transmitting agency based on ID information of those data, In the case of data which distinguishes a kind of data and in which data operates a video source. A video source is operated according to the data, and when data is data of acquisition of a right of priority, or release, according to the data, it has a network management section which forbids or cancels operation to a video source from other than a specific subunit.
[0011]An image network system concerning the invention according to claim 2, While including select data which chooses a video source as data sent out from a remote control, it constitutes so that operation to a video source which chose a network management section with select data from other than a specific subunit may be forbidden or canceled.
[0012]An image network system concerning the invention according to claim 3 is constituted so that operation of as opposed to a video source from the network management section itself [this] for a network management section may be forbidden or canceled.
[0013]An image network system control method concerning the invention according to claim 4, Data of acquisition of data and a right of priority which operate a video source, or release which is transmitted from two or more subunits and in which ID information was added is received, While distinguishing a subunit of a transmitting agency based on ID information of those data, In the case of data which distinguishes a kind of data and in which data operates a video source. A video source is operated according to the data, and when data is data of acquisition of a right of priority, or release, according to the data, operation to a video source from other than a specific subunit is forbidden or canceled.
[0014]
[Embodiment of the Invention]Hereafter, one gestalt of implementation of this invention is explained. Embodiment 1. drawing 1 is a block diagram showing the composition of the image network system by this embodiment of the invention 1. In a figure, the remote controls 1A-1C operate an AV equipment group (video sources 6A-6C) by a user's operation. (For example, reproduction, a stop, a rapid traverse, etc.) The command signal (data) which operates the remote control signal (data) of the infrared rays etc. to carry out and right-of-priority acquisition, or release is sent out.
[0015]Here, the figure in which drawing 2 shows the bit configuration of a remote control signal, and drawing 3 are the figures showing the bit configuration of a command signal. As shown in drawing 2, the remote control signal 10 comprises the custom code 11 which is a code which the product has separately, the video source subdevice bit (select data) 12 which chooses the video sources 6A-6C, and the remote control data 13 which operate the video sources 6A-6C.
[0016]As shown in drawing 3, the command signal 20, It comprises the right-of-priority acquisition or the release bit 23 which controls acquisition or release of the custom code 21 which is a code which the product has separately, the video source subdevice bit (select data) 22 which chooses the video sources 6A-6C, and the right of priority of each subunits 2A-2C. The custom codes 11 and 21 and the video source subdevice bits 12 and 22 of the remote control signal 10 and the command signal 20 are the same.
[0017]The subunits 2A-2C are installed in two or more places (for example, two or more rooms, such as a child's room and a bedroom), The two above-mentioned kinds of remote control signals 10 and the command signal 20 which were sent out from each remote controls 1A-1C are received, The remote

control signal 10 and command signal 20 are changed into the remote-control signal and command control signal of an electrical signal which added data (ID) peculiar to each subunits 2A-2C, respectively, A remote-control signal and a command control signal are transmitted to the network box 4 via the transmission line 3A - 3Cs, such as a coaxial cable.

[0018]The subunits 2A-2C receive the video signal transmitted from the network box 4 via the transmission line 3A - 3C, and send the video signal to the television (not shown) installed near each subunits 2A-2C. The user can watch an image on television installed near the subunits 2A-2C.

[0019]Here, the figure in which drawing 4 shows the bit configuration of a remote-control signal, and drawing 5 are the figures showing the bit configuration of a command control signal. As shown in drawing 4, the custom code 11 of the above-mentioned remote control signal 10 (drawing 2) is deleted by each subunits 2A-2C, and, as for the remote-control signal 30, subunit ID31 which shows information peculiar to each subunits 2A-2C is added. Other bit configurations are the same as that of the above-mentioned remote control signal 10.

[0020]As shown in drawing 5, the custom code 21 of the above-mentioned command signal 20 (drawing 3) is deleted by each subunits 2A-2C, and, as for the command control signal 40, subunit ID41 which shows information peculiar to each subunits 2A-2C is added. Other bit configurations are the same as that of the above-mentioned command signal 20.

[0021]When drawing 1 is referred to, the network box (network management section) 4, It is installed in one place (for example, living room etc.), and the remote-control signal 30 and the command control signal 40 which were transmitted via the transmission line 3A - 3C from each subunits 2A-2C are received, By reading the remote-control signal 30 and command control signal 40, acquisition or release of operation of each video sources 6A-6C and the right of priority of each subunits 2A-2C is controlled.

[0022]The network box 4 receives the video signal from the video sources 6A-6C of each AV equipment (not shown), and transmits the video signal to each subunits 2A-2C corresponding to the video source subdevice bit 32 of the remote-control signal 30 via the transmission line 3A - 3C.

[0023]Television (not shown) is formed also near the network box 4, and the user can also operate the video sources 6A-6C from the network box 4 while being able to watch an image on the television.

[0024]The remote control commanders 5A-5C send out the remote control data 33 of the remote-control signal 30 sent from the network box 4 to each video sources 6A-6C. The video sources 6A-6C are video sources of AV equipment, such as a CS tuner, a videotape recorder, and a DVD player, are operated according to the remote control data 33 from each remote control Commando 5A-5C, and transmit a video signal to the network box 4.

[0025]Next, operation is explained. This Embodiment 1 explains the case where the video source 6A is operated from the subunit 2A side.

[0026](1) When operating it to the video source 6A from the operation subunit 2A side of the video source by a remote-control signal, and a user operates the remote control 1A, send out the infrared remote control signal 10 to the subunit 2A from the remote control 1A. At this time, the video source subdevice bit 12 of the remote control signal 10 is a bit which chooses the video source 6A.

[0027]If the subunit 2A is received [the remote control signal 10 sent out from the remote control], while deleting the custom code 11 from the remote control signal 10, Subunit ID which shows information peculiar to the subunit 2A is added to the remote control signal 10, it is made the remote-control signal 30, the remote-control signal 30 is changed into an electrical signal, and the remote-control signal 30 is transmitted to the network box 4 via the transmission line 3A.

[0028]Drawing 6 is a flow chart for explaining the control action of a network box. If the remote-control signal 30 from the subunit 2A is received (step ST1), the network box 4, Subunit ID31 of the remote-control signal 30 is read, and it is distinguished the remote-control signal 30 from which subunits 2A-2C it is (step ST2). In this case, it is judged that the network box 4 is the remote-control signal 30 from the subunit 2A based on subunit ID31.

[0029]Next, the network box 4 reads the video source subdevice bit 32 of the remote-control signal 30, and distinguishes the remote-control signal 30 over which video sources 6A-6C it is (step ST3). In this case, it is judged that the network box 4 is the remote-control signal 30 over the video source 6A.

[0030]Next, the network box 4 reads the remote control data 33 of the remote-control signal 30, right-of-priority acquisition, or the release bit 43, and distinguishes whether it is, the kind 30, i.e., the remote-control signal, of data, or it is the command control signal 40 (step ST4). In this case, since it is the remote-control signal 30, the network box 4 transmits the remote control data 33 of the remote-control signal 30 to the remote control commander 5A according to the video source subdevice bit 32 (step ST5).

[0031]The remote control commander 5A sends out the remote control data 33, such as infrared rays, to the video source 6A. If the remote control data 33 are received, the video source 6A will perform operations (for example, reproduction, a stop, a rapid traverse, etc.) according to the remote control data 33, and will transmit a video signal to the network box 4.

[0032]The network box 4 will transmit a video signal to the subunit 2A according to the video source subdevice bit 32 of the remote-control signal 30, if the video signal from the video source 6A is received (step ST6) (step ST7).

[0033]The subunit 2A will send the video signal to the television (not shown) currently installed near the subunit 2A, if a video signal is received.

[0034](2) When performing the acquisition or release of a right of priority to the video source 6A from the acquisition or release subunit 2A side of the right of priority of each subunit by a command control signal, and a user operates the remote control 1A, The infrared command signal 20 is sent out to the subunit 2A from the remote control 1A. At this time, the video source subdevice bit 22 of the command signal 20 is a bit which chooses the video source 6A.

[0035]If the subunit 2A is received [the command signal 20], while deleting the custom code 21 from the command signal 20, Subunit ID41 which shows information peculiar to the subunit 2A is added to the command signal 20, it is made the command control signal 40, the command control signal 40 is changed into an electrical signal, and the command control signal 40 is transmitted to the network box 4 via the transmission line 3A.

[0036]The network box 4 like the case of the above-mentioned remote-control signal 30, The command control signal 40 from the subunit 2A is received (step ST1), The subunits 2A-2C are distinguished from subunit ID41 (step ST2), The video sources 6A-6C are distinguished from the video source subdevice bit 32 (step ST3), and the kind of data is distinguished from the remote control data 33, right-of-priority acquisition, or the release bit 43 (step ST4). In this case, it is judged that the network box 4 is the acquisition or release of a right of priority to the video source 6A from [from the command control signal 40] the subunit 2A.

[0037]When it is the command control signal 40 as a result of distinction of the kind of data, the network box 4 distinguishes whether right-of-priority inclusion or the release bit 43 is acquisition of a right of priority, or it is release (step ST8).

[0038]As a result, in acquisition of a right of priority, the network box 4 forbids the operation to other subunit 2Bs and the video source 6A from 2C (step ST9). That is, the network box 4 forbids transmission (step ST5) of the remote control data 33 to the video source 6A based on other subunit 2Bs and the remote-control signal 30 from 2C.

[0039]On the other hand, in release of a right of priority, the network box 4 cancels the operation of control to the video source 6A from other subunits 2A-2C (step ST10). That is, the network box 4 enables transmission (step ST5) of the remote control data 33 to the video source 6A based on the remote-control signal 30 from other subunits 2A-2C.

[0040]Although the above-mentioned embodiment explained the operation and the acquisition of a right of priority, or release to the video source 6A from the subunit 2A, It is the operation same with above-mentioned having explained the case of the operation to the video sources 6B and 6C and acquisition of a right of priority, release or subunit 2B, and 2C to the operation to the video sources 6A-6C and acquisition of a right of priority, or release from the subunit 2A.

[0041]As mentioned above, while distinguishing the subunit (2A) of a transmitting agency based on subunit ID 31 and 41 of the remote-control signal 30 and the command control signal 40 according to this Embodiment 1, Distinguish the remote-control signal 30 or the command control signal 40, and In

the case of the remote-control signal 30. According to the remote control data 33, operate a video source (6A) and In the case of the command control signal 40. Since it constituted according to the command control signal so that the operation to the video source (6A) from subunits (2B, 2C) other than a specific subunit (2A) might be forbidden or canceled, A right of priority can be granted only to a specific subunit (2A), and, as a result, problems, like the quarrel over TV programs by each subunits 2A-2C arises can be solved.

[0042]By the video source subdevice bits 32 and 42 which are contained in the remote-control signal 30 and the command control signal 40 and which choose the video sources 6A-6C. Since it constituted so that the operation to the video source (6A) selected by the video source subdevice bits 32 and 42 from subunits (2B, 2C) other than a specific subunit (2A) might be forbidden or canceled, Even when there are two or more video sources 6A-6C, a right of priority can be granted to each video source 6A - every 6C only to a specific subunit (2A), and it can lessen further that a quarrel over TV programs etc. arise.

[0043]As embodiment 2. **** of was done, it is operational in the video sources 6A-6C also from the network box 4, but not only to the subunits 2A-2C, it may constitute so that operation of the video sources 6A-6C may be forbidden also to the network box 4. It may constitute so that a right of priority may also be granted to the network box 4. In this case, it is realizable by adding ID which shows information peculiar to the network box 4 to the remote-control signal 30 and the command control signal 40.

[0044]

[Effect of the Invention]. As mentioned above, according to the invention according to claim 1, are sent out from a remote control. Two or more subunits which receive the data of acquisition of the data and the right of priority which operate a video source, or release, add ID information to those data and transmit to it, While receiving the data transmitted from two or more subunits and distinguishing the subunit of a transmitting agency based on the ID information of those data, In the case of the data which distinguishes the kind of data and in which data operates a video source. When a video source is operated according to the data and data is data of acquisition of a right of priority, or release, Since it had the network management section which forbids or cancels the operation to the video source from other than a specific subunit according to the data, A right of priority can be granted only to a specific subunit, and, as a result, the effect that problems, like the quarrel over TV programs by each subunit arises are solvable is done so.

[0045]While including the select data which chooses a video source as the data sent out from a remote control according to the invention according to claim 2, Since it constituted so that the operation to the video source which chose the network management section with the select data from other than a specific subunit might be forbidden or canceled, Even when there are two or more video sources, for every video source, a right of priority can be granted only to a specific subunit, and the effect that it can lessen further that a quarrel over TV programs etc. arise is done so.

[0046]According to the invention according to claim 3, since it constituted so that operation of as opposed to the video source from the network management section itself [this] for a network management section might be forbidden or canceled, the effect that a possibility that a quarrel over TV programs etc. will arise further becomes low is done so.

[0047]. According to the invention according to claim 4, are transmitted from two or more subunits. While receiving the data of acquisition of the data and the right of priority which operate a video source, or release in which ID information was added and distinguishing the subunit of a transmitting agency based on the ID information of those data, In the case of the data which distinguishes the kind of data and in which data operates a video source. Since a video source is operated according to the data, and the operation to the video source from other than a specific subunit is forbidden or canceled according to the data when data is data of acquisition of a right of priority, or release, Like claim 1, a right of priority can be granted only to a specific subunit, and, as a result, the effect that problems, like the quarrel over TV programs by each subunit arises are solvable is done so.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1]It is a block diagram showing the composition of the image network system by this embodiment of the invention 1.
[Drawing 2]It is a figure showing the bit configuration of a remote control signal.
[Drawing 3]It is a figure showing the bit configuration of a command signal.
[Drawing 4]It is a figure showing the bit configuration of a remote-control signal.
[Drawing 5]It is a figure showing the bit configuration of a command control signal.
[Drawing 6]It is a flow chart for explaining the control action of a network box.
[Description of Notations]
1A-1C Remote control
2A-2C Subunit
4 Network box (network management section)
6A - 6C video source

[Translation done.]